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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/758,575	01/09/2001	Joerg Kaufmann	59516-216/pp-01656.002	9437

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EXAMINER	
HARRIS, ALANA M	

ART UNIT	PAPER NUMBER
1643	

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/758,575	KAUFMANN ET AL.	
	Examiner	Art Unit	
	Alana M. Harris, Ph.D.	1643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 August 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 5-35* is/are pending in the application.

4a) Of the above claim(s) *12-35* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 5-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments and Amendments

1. Claims 1 and 5-35 are pending.

Claims 12-35, drawn to non-elected inventions are withdrawn from examination.

Claims 1 and 5-11 are examined on the merits.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Maintained Rejections

Double Patenting

3. The provisional rejection of claims 1 and 5-11 are under 35 U.S.C. 101 as claiming the same invention as that of claims 1-11 of copending Application No. 10/200,026 (filed July 18, 2002) is maintained.

Applicants assert "[they] will file a terminal disclaimer at the appropriate stage when allowable subject matter is indicated in this application.", see Remarks filed August 31, 2005, page 7, section five. This point of view has been considered, but found unpersuasive. The rejection will stand until Applicants' applications no longer share the same claimed subject matter.

Claim Rejections - 35 USC § 112

4. The rejection of claims 1 and 5-11 under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement is maintained.

Applicants continually argue that the state of the art has progressed considerably and one of skill in the art would be cognizant of advanced methods of protein chemistry since 1988, publication date of Lazar referenced in the first action on the merits (FAOM) mailed November 18, 2004, see Remarks, page 7, paragraph 3. Applicants further their argument listing a number of examples within the specification that purportedly support their position. Applicants also submit a Declaration signed by Christoph Reinhard, Ph.D. in further support of their arguments. The Declaration discusses data obtained using tissue samples form breast cancer patients and testing these sample by immunohistochemical staining with hsOAF antibody.", see the Remarks, page 8, second paragraph, as well as the Declaration denoted as Exhibit 3. The Examiner has considered the Declaration, as well as the arguments and found these points of view unpersuasive.

The Examiner has reviewed Dr. Reinhard's Declaration, as well as Applicants' arguments presented in the Results and those sections of the specification identified as presenting evidence that aids in obviating the instant rejection. Both the Declaration and the arguments are remiss in addressing the issue of implementing polynucleotide variants and their encoded products in the applications set forth in the specification. Moreover, the Declaration and the arguments are not commensurate in scope with the thrust of the rejection. Applicants' specification has not provided enabling disclosure in

which a definitive breast cancer diagnosis or implementation of the claimed polynucleotide, which has less than 100% sequence identity with the full length polynucleotide that encodes a variant sequence of SEQ ID NO: 2 in assays. The analysis set forth in the FAOM, paragraph 4 is still necessary. Applicants attempt to address the issue of conservative amino acid substitutions by listing page 14, lines 10-15 of the specification should be reviewed. This section of the specification does not aid in nullifying the Examiner's rejection. There is no disclosure of making and using a polynucleotide at least 90% identical to the polynucleotide listed in sections a-c of claim 5, nor enabling disclosure of which particular polynucleotides should be changed, mutated, deleted to bring forth a polypeptide with between one and ten conservative amino acid substitutions. The examples set forth in the specification seem not to include controls in the experimental design. For instance, upon review of Example 2, beginning on page 31 lists a number of breast cancer cell lines, however no breast lines without a disease. While Applicants submit that the expression of SEQ ID NO: 1 was increased in cell lines with high metastatic potential this does not rule out the expression possibly found in a normal control would not be the same as the expression found in low metastatic cell lines. And while Applicants do state that Example 3 on page 33 of the specification and Exhibit 1 exemplify "[h]ighly metastatic cell lines showed much stronger hsOAF secretion than did low metastatic and non-metastatic cell lines" this documentation does not provide sufficient guidance as to what nucleic acid residues should be changed that yield between one and ten substitutions within the protein sequence, SEQ ID NO: 2. Nor does this information provide sufficient guidance

regarding variant polynucleotides and polypeptides being used in the suggested methods listed in the specification. The experimental design presented in the specification continues to lack information regarding the applicability of mutants of polynucleotides and their corresponding encoded products which share limited sequence identity to SEQ ID NO: 2 in diagnostic methods relative to breast diseases.

Based on the analysis set forth herein and in previous Actions it would require undue experimentation for the skilled artisan to practice this invention because there is no support in the specification for the enablement of the broadly claimed invention. Therefore, in view of the insufficient guidance in the specification, extensive experimentation would be required to enable the claims.

5. The rejection of claims 1 and 5-11under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement is maintained.

Applicants respectfully request reconsideration and withdrawal of the instant rejection. Applicants assert by disclosing a polynucleotide sequence encoding the human hsOAF protein they have essentially disclosed the features of the genus of hsOAF polynucleotides. Applicants also note case law, which they argue does not read on their claimed invention. The arguments have been reconsidered, but found unpersuasive.

Applicants' specification does not present variants of SEQ ID NO: 1 and their corresponding protein products, which may be denoted as variants of SEQ ID NO: 2, as well as the vector and host cell containing the said variant polynucleotides. The written

description in this instant case only sets forth wild type hsOAF (SEQ ID NO: 2 in its entirety) and not molecules with 90% sequence identity to the said sequences. The written description is not commensurate in scope with claims drawn to variants of SEQ ID NO: 2, which have not been defined by functional or structural characteristics. Where there is substantial variation within a genus (which the claims reads on) one must describe a sufficient variety of species to reflect variation within the genus, see Official Gazette, 1242 OG 174, first column, section (2), January 30, 2001.

At the time the application was filed Applicants only had possession of nucleic acids that encode SEQ ID NO: 2 and not nucleic acid sequences that encode polypeptides with reduced sequence homology that may or may not act in the manner suggested by the specification. The specification does not evidence the possession of nucleic acid molecules that may or may not encode hsOAF molecules. Nor does the specification teach any 90% sequence molecules and those molecules, which encode a polypeptide having conservative amino acid substitutions. There is insufficient support the generic claims as provided by the Interim Written Description Guidelines published in the June 15, 1998 Federal Register at Volume 63, Number 114, pages 32639-32645.

The full breadth of the claims continues not to meet the written description provision of 35 U.S.C. 112, first paragraph and consequently the rejection is maintained.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alana M. Harris, Ph.D. whose telephone number is (571)272-0831. The examiner works a flexible schedule, however she can normally be reached between the hours 7:30 am to 6:30 pm, with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry R. Helms can be reached on (571) 272-0832. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ALANA M. HARRIS, PH.D.
PRIMARY EXAMINER

Alana M. Harris, Ph.D.
14 November 2005